CLAIMS

What is claimed is:

5   1.   A system for discovering and connecting to a preferred remote Bluetooth device

by a local Bluetooth device, comprising:

        an inquiry scan cache that is refreshed by a periodic inquiry scan;

        a page scan cache that is refreshed by way of an attempt to connect to the

preferred remote Bluetooth device; and

10   a list of visible remote Bluetooth devices comprising entries in the inquiry scan

cache, concatenated with each entry in the page scan cache that the local Bluetooth device

successfully contacts by way of a periodic page scan performed more frequently than the

periodic inquiry scan.

15   2.   The system of claim 1 wherein the preferred remote Bluetooth device provides a

Network Access Point (NAP) service.

3.   The system of claim 1 wherein the preferred remote Bluetooth device provides a

Group Ad-hoc Network (GN) service.

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4.   The system of claim 1, further comprising an automatic configuration service

component that polls for the list of visible remote Bluetooth devices.

5.   The system of claim 1 wherein the page scan cache holds a finite number of

entries and is associated with an expiration policy.

6.   The system of claim 1 wherein the inquiry scan cache is updated by way of an

5   attempt by a remote Bluetooth device to connect to the local Bluetooth device.

7.   A method for discovering and connecting to a preferred remote Bluetooth device

by a local Bluetooth device, comprising:

        updating an inquiry scan cache by way of a periodic inquiry scan;

10   if an attempt is made to connect to the preferred remote Bluetooth device,

updating a page scan cache with a corresponding entry; and

        periodically, and more frequently than the periodic inquiry scan, forming a list of

visible remote Bluetooth devices.

15   8.   The method of claim 7 wherein forming the list of visible remote Bluetooth

devices further comprises:

        for each entry in the page scan cache, performing a page scan, and, if the page

scan was successful, adding the entry to the list of visible remote Bluetooth devices; and

        concatenating entries in the inquiry scan cache to the list of visible remote

20   Bluetooth devices.

9.   The method of claim 7 wherein the page scan cache holds a finite number of

entries, the method further comprising, for each entry added to the page scan cache:

setting an expiration time for the entry;

if the periodic inquiry scan does not reveal the entry, reducing the expiration time; and

if the expiration time has occurred, removing the entry from the page scan cache.

10.   The method of claim 7, further comprising:

if a remote Bluetooth device attempts to connect to the local Bluetooth device, adding an entry for the remote Bluetooth device to the inquiry scan cache.

11.   The method of claim 7 wherein the preferred remote Bluetooth device provides a NAP service.

12.   The method of claim 7 wherein the preferred remote Bluetooth device provides a GN service.

13.   The method of claim 7 wherein forming a list of visible remote Bluetooth devices is in response to polling by an automatic configuration service.

14.   A computer-readable medium storing instructions implementing a method for discovering and connecting to a remote Bluetooth device by a local Bluetooth device, the method comprising:

updating an inquiry scan cache by way of a periodic inquiry scan;

if an attempt is made to connect to the preferred remote Bluetooth device,

updating a page scan cache with a corresponding entry; and

periodically, and more frequently than the periodic inquiry scan, forming a list of visible remote Bluetooth devices.

15.   The computer-readable medium of claim 14 wherein forming the list of visible remote Bluetooth devices further comprises:

for each entry in the page scan cache, performing a page scan, and, if the page scan was successful, adding the entry to the list of visible remote Bluetooth devices; and

concatenating entries in the inquiry scan cache to the list of visible remote Bluetooth devices.

16.   The computer-readable medium of claim 14, further comprising, for each entry added to the page scan cache:

setting an expiration time for the entry;

if the periodic inquiry scan does not reveal the entry, reducing the expiration time; and

if the expiration time has occurred, removing the entry from the page scan cache.

17.   The computer-readable medium of claim 14, further comprising:

if a remote Bluetooth device attempts to connect to the local Bluetooth device, adding an entry for the remote Bluetooth device to the inquiry scan cache.

18.   Computer-readable media storing one or more modules implementing a system for

discovering and connecting to a preferred remote Bluetooth device by a local Bluetooth device, comprising:

an inquiry scan cache that is refreshed by a periodic inquiry scan;

a page scan cache that is refreshed by way of an attempt to connect to the

5 preferred remote Bluetooth device; and

a list of visible remote Bluetooth devices comprising entries in the inquiry scan cache, concatenated with each entry in the page scan cache that the local Bluetooth device successfully contacts by way of a periodic page scan performed more frequently than the periodic inquiry scan.

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19. The computer-readable media of claim 18, further comprising a user-mode Bluetooth PAN service component.

20. The computer-readable media of claim 19, further comprising a kernel-mode

15 Bluetooth PAN driver component.

21. The computer-readable media of claim 18, further comprising an automatic configuration service component that polls for the list of visible remote Bluetooth devices.

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